VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

Page 15, substitute for the paragraph beginning on line 16:

Fig. 3 shows an embodiment of a power system [stabiliser] stabilizer according to the present invention. A main machine 2 is here an asynchronous machine with wound rotor 10. The stator 12 of the main machine has a 3-phase winding 14 connected via a transformer 3 to a power network. The rotor winding 16 can in principle have a number of phases larger than or equal to two. The synchronous rotational speed that is set-up by the 3-phase winding 14 in the stator 12 is determined by the frequency in the power network and by the number of poles that the winding 14 is made with. The rotational speed of the rotor 10 may be changed in relation to this in that an alternating current flows in the rotor winding 16 of the main machine 2. This current is fed by a current converter 18. The frequency of this current is determined by the difference between the synchronous rotational speed, the rotational speed of the rotor and the pole number of the machine. A regulating machine 20 is mounted at the same common shaft 22. The regulating machine 20 is in this example a synchronous machine, where the armature winding 24 is placed in the rotor 26. The co-rotating current converter 18 may therefore transfer power between the rotor 26 of the regulating machine and the rotor 10 of the main machine. When the main machine 2 rotates with synchronous speed, all electric power in the stator is [transmitted between the rotor 10 and stator 12 of the machine by rotational induction] converted into mechanical power in the rotor (if losses are disregarded). No active electric power is therefore supplied to the rotor winding 16 at this occasion [(if losses are disregarded)]. When the machine 2 rotates asynchronously, a certain part of the power in the stator 12 will be transmitted [by speed induction from the rotor winding 16] transformationally from the rotor 10. This electric energy should therefore be provided to the rotor winding 16 from the current converter

18. The current converter 18 thus makes provision for the [magnetising] magnetizing of the main machine 2 and for supplying/receiving regulating power (active electric power) to/from the rotor winding 16 from/to the main machine 2. The task of the regulating machine 20 is to operate as a voltage source for the current converter 18 so that it can [magnetise] magnetize the main machine 2 and to transmit the regulation power into mechanical power on the common shaft 22 in that it alternately works as motor or generator. In a preferred embodiment, the regulating machine 20 works in operation as synchronous machine. The regulating machine 20 can have another pole number than the main machine 2 so that the frequency in this can be increased. The regulating machine 20 presents direct current fed field windings 34 in the stator 28. These are supplied in normal operation via an alternating - direct current converter 42 connected to the same three-phase lines as the stator windings 14 of the main machine, via a transformer 44. At drop-out of the connected power network or other types of operation disturbances, the field winding of the regulating machine can be supplied from a battery back-up 65 or by providing the regulating machine with permanent magnets. In the first case, the converter will be an UPS (Uninterruptable Power Supply).

IN THE CLAIMS:

1. (Amended) Power system [stabiliser] stabilizer comprising a rotating electrical main machine [(2, 2')] with power line terminals, a current converter [(18, 18')] and a voltage source, **[characterised in that]** comprising

windings [(14)] in a stator [(12)] in the electrical main machine [(2, 2') are] connected to the electric power network terminals;

a rotor [(10)] in the electrical main machine [(2, 2')] comprises alternating current windings [(16)];

one of the terminals of the current converter [(18, 18')] is connected to the alternating current windings [(16)] of the rotor;

the other terminal of the current converter [(18, 18')] is connected to the voltage source; whereby electric power is exchanged via the power line terminals by changing the rotational speed of the rotor [(10)].

2. (Amended) Power system [stabiliser] stabilizer according to claim 1, [**characterised in that**] wherein the voltage source is a voltage source, which is independent of the power lines.

3. (Amended) Power system [stabiliser] stabilizer according to claim 1, [or 2, **characterised in that**] wherein the voltage source is a regulating machine [(20, 20')].

4. (Amended) Power system [stabiliser] stabilizer according to claim 1, [2 or 3, **characterised in that**] wherein the regulating machine [(20, 20')] and the main machine [(2, 2')] has a common shaft [(22)].

5. (Amended) Power system [stabiliser] stabilizer according to claim 4, [**characterised in that**] wherein the current converter [(18')] is arranged at the static parts of the main machine and connected to the rotor windings [(16)] of the main machine via brushes [(30)] and slip rings [(32)].

6. (Amended) Power system [stabiliser] stabilizer according to claim 5, [characterised by] including a control system, [which comprises] comprising a first control unit [(48)] for control of the static current converter [(18')].

7. (Amended) Power system [stabiliser] stabilizer according to claim 6, [characterised in that] wherein the control system comprises a second control unit [(46)], which is arranged co-rotating with the common shaft [(22)].

8. (Amended) Power system [stabiliser] stabilizer according to claim 6, [or 7, characterised in that] wherein the first control unit [(48)] is arranged for control of the voltage source.

9. (Amended) Power system [stabiliser] stabilizer according to claim 4, [characterised in that] wherein the regulation machine [(20)] and the main machine [(2)] are brushless and in that the current converter [(18)] is arranged co-rotating at the shaft [(22)] of the rotor.

10. (Amended) Power system [stabiliser] stabilizer according to claim 9, [characterised by] including a control system, which comprises a first control unit [(46)] for control of the current converter [(18)], which first control unit [(46)] is arranged co-rotating at the shaft [(22)] of the rotor.

11. (Amended) Power system [stabiliser] stabilizer according to claim 10, [characterised in that] wherein the control system comprises a second control unit [(48)], which is arranged for control of the voltage source.

12. (Amended) Power system [stabiliser] stabilizer according to claim 8 [or 11], [characterised in that] wherein the control system [(46, 48)] comprises an electric power network sensor [(50; 51)] for sensing of an electric disturbance in the electric power network.

13. (Amended) Power system [stabiliser] stabilizer according to claim 12, [characterised in that] wherein the electric disturbance is a disturbance of at least one quantity selected from the group of:

the amplitude of the voltage;

the virtual value of the voltage;

the phase of the voltage;

the frequency of the voltage;

the amplitude of the current;

the virtual value of the current;

the phase of the current; and

the frequency of the current.

14. (Amended) Power system [stabiliser] stabilizer according to claim 12 [or 13], **[characterised in that]** wherein the control system comprises a first temperature sensor [(64)] for sensing of the stator temperature.

15. (Amended) Power system stabiliser according to claim 14, **[characterised in that]** wherein the control system comprises a second temperature sensor [(60)] for sensing of the rotor temperature, which second temperature sensor [(60)] being connected to the co-rotating control unit [(46)].

16. (Amended) Power system stabiliser according to claim 14 [or 15], **[characterised in that]** wherein the control system comprises communication means [(54, 56)] for wireless communication between the control units [(46, 48)].

17. (Amended) Power system [stabiliser] stabilizer according to [any of the claims 12 to 16, **characterised by**] claim 12, including a transformer [(3)] arranged between the stator winding [(14)] and the power line terminals.

18. (Amended) Power system [stabiliser] stabilizer according to claim 17, [**characterised in that**] wherein the electric power network sensor [(50)] of the control system is arranged for sensing of voltage and/or current in the terminal between the transformer [(3)] and the stator winding [(14)].

19. (Amended) Power system [stabiliser] stabilizer according to [any of the claims 1 to 18, **characterised by**] claim 1, including a flywheel arranged at the shaft [(22)] of the electrical main machine.

20. (Amended) Power system [stabiliser] stabilizer according to [any of the claims 1 to 19, **characterised by**] claim 1, including a driving means arranged for applying a force to the shaft [(22)] of the electrical main machine.

21. (Amended) Power system [stabiliser] stabilizer according to claim 20, [**characterised in that**] wherein the driving means is a turbine.

22. (Amended) Power system [stabiliser] stabilizer according to claim 20, [**characterised in that**] wherein the driving means is a combustion engine.

23. (Amended) Power system [stabiliser] stabilizer according to [any of the claims 1 to 22, **characterised by**] claim 1, including a load means arranged for collecting of the driving force of the shaft [(22)] of the electrical main machine.

24. (Amended) Power system [stabiliser] stabilizer according to claim 23, **[characterised in that]** wherein the load means is a brake [(70)].

25. (Amended) Power system [stabiliser] stabilizer according to claim 23, **[characterised in that]** wherein the load means is an electrical generator.

26. (Amended) Power system [stabiliser] stabilizer according to [any of the claims 1 to 25, **characterised in that**] claim 1, wherein the rotor winding [(16)] is arranged for having a current displacement, which is dependent on the frequency of the rotor current.

27. (Amended) Power network comprising power lines and a shunt [stabiliser (84, 84A, 84B)] stabilizer, which shunt [stabiliser] stabilizer comprises a rotating electrical main machine [(2, 2')] connected to the power lines, a current converter [(18, 18')] and a voltage source, **[characterised in that]**

windings [(14)] in a stator [(12)] in the electrical main machine [(2, 2') are] being connected to the power lines;

a rotor [(10)] in the electrical main machine [(2, 2')] comprises alternating current windings [(16)];

one of the terminals of the current converter [(18, 18') is] being connected to the alternating current windings [(16)] of the rotor;

the other terminal of the current converter [(18, 18') is] being connected to the voltage source;

whereby electric power is exchanged between the power lines and the shunt [stabiliser (84, 84A, 84B)] stabilizer by changing the rotational speed of the rotor [(10)].

28. (Amended) Power network according to claim 27, [characterised in that] wherein the voltage source is [a voltage source, which is] independent of the power lines.

29. (Amended) Power network according to claim 27, [or 28, characterised in that] wherein the voltage source is a regulating machine [(20, 20')].

30. (Amended) Power network according to claim 27, [28 or 29, characterised in that] wherein the regulating machine [(20, 20')] and the main machine [(2, 2')] has a common shaft [(22)].

31. (Amended) Power network according to claim 30, [characterised in that] wherein the current converter [(18')] is arranged at the static parts of the main machine and connected to the rotor windings [(16)] of the main machine via brushes [(30)] and slip rings [(32)].

32. (Amended) Power network according to claim 31, [characterised by] including a control system, which comprises a first control unit [(48)] for control of the static current converter [(18')].

33. (Amended) Power network according to claim 32, [characterised in that] wherein the control system comprises a second control unit [(46)], which is arranged co-rotating with the common rotor [(22)].

34. (Amended) Power network according to claim 32 [or 33], **[characterised in that]** the first control unit [(48)] is arranged for control of the voltage source.

35. (Amended) Power network according to claim 30, **[characterised in that]** wherein the regulation machine [(20] (and the main machine [(2)] are brushless and in that the current converter [(18)] is arranged co-rotating at the shaft [(22)] of the rotor.

36. (Amended) Power network according to claim 35, **[characterised by]** wherein a control system, which comprises a first control unit [(46)] for control of the current converter [(18)], which first control unit [(46)] is arranged co-rotating at the shaft [(22)] of the rotor.

37. (Amended) Power network according to claim 36, **[characterised in that]** wherein the control system comprises a second control unit [(48)], which is arranged for control of the voltage source.

38. (Amended) Power network according to claim 34 [or 37], **[characterised in that]** wherein the control system [(46, 48)] for control of the voltage source and the current converter comprises an electric power network sensor [(50; 51)] for sensing of an electric disturbance in the electric power network.

39. (Amended) Power network according to claim 38, **[characterised in that]** wherein the electric disturbance is a disturbance of at least one quantity selected from the group of:

the amplitude of the voltage; the virtual value of the voltage; the phase of the voltage;

the frequency of the voltage;

the amplitude of the current;

the virtual value of the current;

the phase of the current; and

the frequency of the current.

40. (Amended) Power network according to claim 39, **[characterised in that]** wherein the control system comprises a first temperature sensor [(64)] for sensing of the stator temperature.

41. (Amended) Power network according to claim 40, **[characterised in that]** wherein the control system comprises a second temperature sensor [(60)] for sensing of the rotor temperature, which second temperature sensor [(60)] being connected to the co-rotating control unit [(46)].

42. (Amended) Power network according to claim 40 [or 41], **[characterised in that]** wherein the control system comprises communication means [(54, 56)] for wireless communication between the control units [(46, 48)].

43. (Amended) Power network according to [any of the claims 38 to 42, **characterised by**] claim 38, including a transformer [(3)] arranged between the stator winding [(14)] and the power lines.

44. (Amended) Power network according to claim 43, [**characterised in that**] wherein the electric power network sensor [(50)] is arranged for sensing of the voltage in the terminal between the transformer [(3)] and the stator winding [(14)].

45. (Amended) Power network according to [any of the claims 27 to 44, **characterised by**] claim 27, including a flywheel arranged at the shaft [(22)] of the electrical main machine.

46. (Amended) Power network according to [any of the claims 27 to 45, characterised by a] claim 27, including driving means arranged for applying a force to the shaft [(22)] of the electrical main machine.

47. (Amended) Power network according to claim 46, [**characterised** in **that**] wherein the driving means [is] comprises a turbine.

48. (Amended) Power network according to claim 46, [**characterised** in that] wherein the driving means [is] comprises a combustion engine.

49. (Amended) Power network according to [any of the claims 27 to 48, **characterised by** a] claim 27, including load means arranged for collecting of the driving force of the shaft of the electrical main machine.

50. (Amended) Power network according to claim 49, [**characterised** in **that**] wherein the load means [is] comprises a brake [(70)].

51. (Amended) Power network according to claim 49, [**characterised** in that] wherein the load means [is] comprises an electrical generator.

52. (Amended) Power network according to [any of the claims 27 to 51, **characterised** in **that**] claim 27, wherein the rotor winding [(16)] is arranged for having a current displacement, which is dependent on the frequency of the rotor current.

53. (Amended) Method for [stabilising of] stabilizing the voltage in a power system comprising the [step] steps of:

transmitting of electric power between a power line and a rotating electrical main machine [(2, 2')], [**characterised by** the step of] including:

regulating [the], by the electrical main machine, [(2, 2')] the emitted/ received, electric power by changing of the rotational speed of the electrical main machine.

54. (Amended) Method according to claim 53, [**characterised** in that] wherein the step of regulation comprises the steps of:

providing of a rotor current through rotor windings [(16)] at the electrical main machine [(2, 2')];

controlling of amplitude, phase and frequency of the rotor voltage for achieving of required amplitude, phase and frequency of the voltage over stator windings [(14)] at the electrical main machine [(2, 2')].

55. (Amended) Method according to claim 54, [**characterised** in **that**] wherein the regulation power of the rotor winding of the main machine is provided by a regulation machine [(20, 20')].

56. (Amended) Method according to claim 55, [**characterised** in **that**] wherein a shaft of the regulation machine [(20, 20')] is mechanically driven by a shaft [(22)] of the electrical main machine [(2, 2')].

57. (Amended) Method according to [any of the claims 53 to 56, **characterised by**] claim 53, including the step of:

sensing of current/voltage of the power line for detecting of disturbances in its amplitude, virtual value, phase or frequency;

whereby the regulation takes place based on at least one of the detected disturbances.

58. (Amended) Method according to claim 57, [**characterised by**] including the step of:

sensing of the temperature of the stator windings [(14)] of the main machine;

whereby the regulation takes place based also on the stator temperature.

59. (Amended) Method according to claim 57 [or 58], [**characterised by**] including the step of:

sensing of the temperature of the rotor windings [(16)] of the main machine; whereby the regulation takes place based also on the rotor temperature.

60. (Amended) Method according to claim 59, **[characterised in that]** wherein the regulation step during a limited time gives electric powers that exceed rated power, valid for continuous operation, for the electrical main machine [(2, 2')].

61. (Amended) Method according to [any of the claims 53 to 60, **characterised by**] claim 53, including the step of:

transferring of control information between the stationary and rotating parts of the main machine.

62. (Amended) Method according to [any of the claims 53 to 61, **characterised by**] claim 53, including the step of:

transforming the voltage over the stator windings [(14)] of the main machine to a suitable network voltage.